Surveillance system total solutions

OEM/ODM Design Service

ACARD TECHNOLOGY
www.acard.com

High Resolution! High Technology!

Surveillance Solutions

ACARD is dedicated to provide total product solutions for video surveillance. Key components for surveillance, such as DVR, CCTV camera, CMS and DVR storage can all be designed internally. Different grades of each product type are also available to meet various surveillance needs. As a professional solution provider of video surveillance products, ACARD continues to innovate in our products and providing the best soutions .

DVR

4CH/8CH/16CH
H.264

CCTV Camera

Box/Dome/PTZ
Mega-pixel
Wide Dynamic
Range

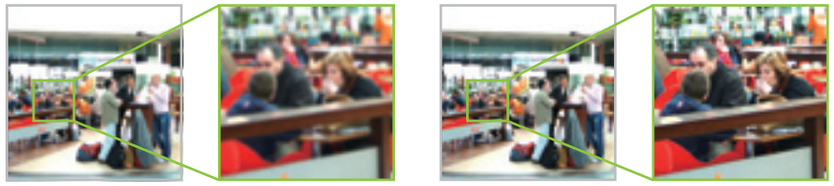
DVR Storage

8-Bay eSATA
RAID System

High Resolution & Real Time DVR

Key Features

1. H.264, D1 recording resolution



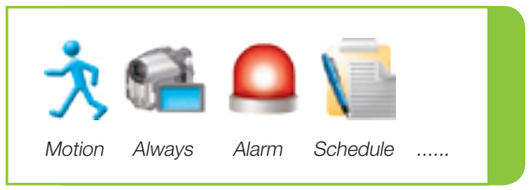
CIF (320×240 / 320×288)

D1 (720×480 / 720×576)

2. eSATA interface (support eSATA RAID up to 32TB)

3. Independent channel record resolution, quality & fps adjustment

4. Support multiple Recording Modes

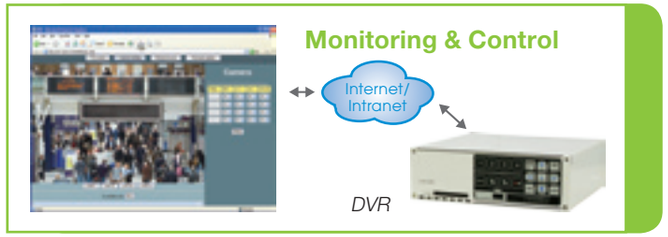


5. CF/USB dual device for FW update & file backup

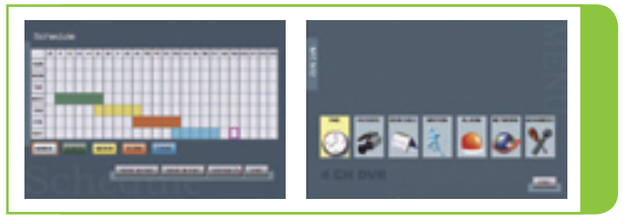
6. Support DVD-RW for file backup

7. Support Mouse Control

8. Support network control & monitoring via Browser



9. User Friendly GUI & Multi-language OSD



10. Support 3G mobile surveillance

11. Event notification via E-mail

12. Support image snapshot

13. Support up to 256X digital Zoom in playback

14. Support CMS

15. Support Pre/Post Alarm Image Buffering

Key Features

Technical Column

The Key Points of Choosing DVR Storage Subsystem

The Era of D1 Resolution Has Arrived

DVRs have become increasingly popular within the cities and even among households. With the advancement of technology, D1 (720 x 480 pixel) or MegaPixel DVR systems will become one of the hottest specifications this year. D1 resolution is 4 times higher than the existing CIF (320 x 240 pixel), therefore, even the finest details, such as faces, license plates, etc. can be seen even clearer.

Expansion of DVR Storage System

As the DVR is upgraded to D1 resolution, the amount of storage capacity needed for recording also doubles, e.g. if a 16ch DVR with 1 TB HDD records continuously for 24 hours, it can record roughly 16 days under CIF, but less than 7 days using D1. As for the relationship between resolution and storage, it is apparent that D1 class DVRs requires much larger storage space.

The standard configuration for a 16ch DVR system on the market today is usually 2 ~ 4 built-in HDD. If lengthy storage of video recordings is needed, then aside from changing HDD, the best way is to use an external storage device. That is the reason why professional grade DVRs are mostly configured with expansion interfaces such as USB or eSATA.

The DVR and its external storage system come together as one. When choosing a DVR, the following technical specifications should be carefully noted.

The DVR' s Storage Requirements

First of all, one must understand the role of the DVR is to preserve important video information. If the images of important moments cannot be provided, then there is no value in keeping it. The requirements for DVR storage include reliability, data security, efficiency, and recording time.

The importance of DVR storage subsystems are reliability, data protection, efficacy, expansion, and compatibility. In terms of reliability, DVRs are in continuous operation 24 hours a day, 7 days a week, 365 days a year, therefore, the reliability of the system is absolutely of top priority. Hence, the demand for a reliable storage system is no less than for a server. As for data protection, it depends upon the site being monitored. The important place like bank, recording cannot be disrupted or data lost due to storage system malfunctions. For efficacy, an efficient storage device can help keep the DVR recording or video playback from stopping. Finally, there is a positive correlation between recording time and storage volume. DVRs must have the flexibility for external storage expansion in order to be able to make adjustments for video storage time.

- **Reliability**

  Presently, USB and eSATAs are the main DVR external interfaces. The reliability and multitasking ability of the eSATA is better than the USB, and is therefore recommended for storage expansion. In addition, the eSATA interface on the DVR and storage devices must meet the electrical characteristics set by the standard organizations. Also use cables that are EMI resistant to attain stable data transmission.

To achieve 24/7 operations, professional grade products are still the main line for reliable storage devices. The consumer storage devices are mostly focus on convenience and stylish design, and is thereby not recommended.

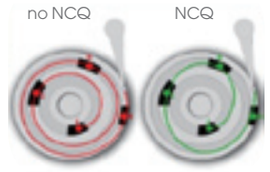
- **Data Safety**

  For systems that demand a higher level of data protection, storage systems with the RAID function should be used. These types of systems have fault-tolerant mechanisms so that even if the hard disk drive is damaged, data will not be lost, and will not affect operations when the drive is replaced.

  In terms of operational aspects, whenever possible, choose storage systems that are easy to operate and have clear LCD displays to reduce user mishandling. Storage systems sold on the market for corporations use usually come with complex function setting, which are suitable for professional users. As DVR users might not have sufficient computer skills, therefore when using DVR with RAID, operations must be simple and easy.

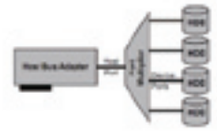
- **Efficacy**

  Recording/Playback on a DVR is a type of random access action for the storage system. An efficient storage system can reduce the sudden pausing of images. The NCQ function on SATA can reorder the disk drive' s read/write instruction; thereby reducing the magnetic head' s waiting time during its random accessing. This is especially significant when multitasking. It can be enhanced up to 30%. Therefore, when using a DVR with storage system, users that use SATA with NCQ function can reduce the sudden pausing of images when simultaneously recording and playing back.



- **Expansion**

  DVRs with the SATA Port Multiplier function can maintain better expansion flexibility. The eSATA expansion interface on most DVRs can be connected to an external HDD or a RAID subsystem, but an eSATA with SATA Port Multiplier will have even better expansion ability. According to specs set by standard organizations, the SATA Port Multiplier can be expanded up to 15 sets of hard disks or RAID subsystems; hence, it can be expanded at any time to cope with the need for longer recording time.



- **Compatibility**

  DVRs and storage systems from the original manufacturer are often the best combination. Compatibility is very important. The system will not be able to operate normally if there are any compatibility problems. Ask the original manufacturer for their recommendation before buying. After all, the compatibility of embedded DVR products are not as mature as the PC industry. Avoid mixing and using products from different manufacturers that have not been tested. Using the DVR and storage system from the same manufacturer is often the best match. Moreover, any technical problems can be resolved by the same manufacturer.

  If you have any product matching related questions, please contact our agents or technical consultants.

DVR Storage System	a. Reliability	b. Data Protection	c. Efficacy	d. Expansion	e. Compatibility
Recommendation	For the system to operate 24/7, use a DVR and professional grade storage device that meets eSATA standards.	Simple and easy to use RAID storage system, even if the hard disk drive is damaged, data will not be lost, and will not affect operations.	Users that use SATA with NCQ function can reduce the sudden pausing of images when simultaneously recording and playing back.	DVRs with the SATA Port Multiplier function can maintain better expansion flexibility.	DVRs and storage systems from the original manufacturer are often the best combination.

Smart H.264 Series

4CH H.264 2D1 Standalone DVR

ADR-7604S CMS (option) D1 eSATA 3G H.264

Features

- H.264 compression technology
  - 1 Year recording time
- Support SATA/ eSATA high capacity storage
  - SATA HDD (up to 32TB each port),
  - eSATA RAID (up to 32TB each port)
- De-Interlace technology
- VGA output
  - Support 1280 x 1024 resolution
  - Support 4:3 & 16:9 monitor display without distortion
- Pentaplex
  - Live, playback, record, backup & network
- Independent channel record resolution, quality & fps adjustment
- Free F/W upgrade to advanced function
- Support USB 2.0 drive for video backup
- Advanced network function
  - Remote control & monitoring via web browser
  - 3G mobile surveillance
- Support multiple recording modes
  - Manual, motion detection, alarm trigger, always, schedule
- Support graphic user interface & multi-language OSD
- Support IR remote & mouse control
- Support watchdog function (Hardware)

Rear panel

Specifications

Video	Video System	NTSC / PAL
	Video Compression Format	H.264
	Video Input	4 (BNC)
	Video Output	4 (BNC)
	Main monitor out	BNC*1, VGA*1
	Call monitor out	BNC*1
	Display Mode	Full, 4
Audio	Audio In	4
	Audio Out	1
Alarm	Alarm in	4
	Alarm out	1
Record	Max Recording Rate(D1)	60 FPS @ 720×480 pixels(NTSC) 50 FPS @ 720×576 pixels(PAL)
	Max Recording Rate(Half-D1)	120 FPS @ 720×240 pixels(NTSC) 100 FPS @ 720×288 pixels(PAL)
	Max Recording Rate(CIF)	120 FPS @ 320×240 pixels(NTSC) 100 FPS @ 320×288 pixels(PAL)
	Max Recording Rate(D1/ Half-D1/CIF)	240 FPS @ 320×240 pixels(NTSC) 200 FPS @ 320×288 pixels(PAL)
Storage	SATA HDDs	Support 3.5" SATA HDD*1 (up to 32TB each port)
	External Storage Expansion	eSATA interface (support 32TB RAID)
Backup	Back up Device	USB 2.0 drive, DVD, Network
Network	Operation System for network function	Windows 2000/XP/Vista/7, Linux, and MAC(option)
	Protocol	TCP/IP, PPPoE, DHCP and Free 2SAN DDNS (Dynamic IP)
	Network Alarm Notification	E-mail
	Support remote control and live view	option
	Support 3G mobile surveillance	option
	Support CMS	option
Other Function	Mulitiplex Operation	Live / record / playback / backup / network
	Motion Detection Area	22 × 15 grids per channel
	Motion Detection Sensitivity	16 level
	Daylight Saving	Yes
	Pre-Record	20MB
	Key Lock(Password Protection)	Yes
	Video Loss Detection	Yes
	Camera Title	up to 10 letters
	IR Remote & Mouse Control	Yes
	Jog & Shuttle	No
	PTZ Control	Yes (Pelco-D, Pelco-P...)
	Watchdog function	Yes
	Operation temperature	10 – 45 degree C
	Dimensions(mm)	195(W) x 65(H) x 183(D) mm
	Power Consumption	DC 19V, <48W

** The specifications are subject to change without notice*

Smart H.264 Series

4CH H.264 2D1 Standalone DVR

ADR-7604SC CMS (option) D1 eSATA 3G H.264

Features

- H.264 compression technology
  - 1 Year recording time
- Support SATA/ eSATA high capacity storage
  - SATA HDD (up to 32TB each port)
  - eSATA RAID (up to 32TB each port)
- De-Interlace technology
- VGA output
  - Support 1280 x 1024 resolution
  - Support 4:3 & 16:9 monitor display without distortion
- Pentaplex
  - Live, playback, record, backup & network
- Independent channel record resolution, quality & fps adjustment
- Free F/W upgrade to advanced function
- Support USB 2.0 drive for video backup
- Advanced network function
  - Remote control & monitoring via web browser
  - 3G mobile surveillance
- Support multiple recording modes
  - Manual, motion detection, alarm trigger, always, schedule
- Support graphic user interface & multi-language OSD
- Support IR remote & mouse control
- Support watchdog function (Hardware)

Rear panel

Specifications

Video	Video System	NTSC / PAL
	Video Compression Format	H.264
	Video Input	4 (BNC)
	Video Output	4 (BNC)
	Main monitor out	BNC*1, VGA*1
	Call monitor out	BNC*1
	Display Mode	Full, 4
Audio	Audio In	4
	Audio Out	1
Alarm	Alarm in	4
	Alarm out	1
Record	Max Recording Rate(D1)	60 FPS @ 720×480 pixels(NTSC) 50 FPS @ 720×576 pixels(PAL)
	Max Recording Rate(Half-D1)	120 FPS @ 720×240 pixels(NTSC) 100 FPS @ 720×288 pixels(PAL)
	Max Recording Rate(CIF)	120 FPS @ 320×240 pixels(NTSC) 100 FPS @ 320×288 pixels(PAL)
	Max Recording Rate(D1/ Half-D1/CIF)	240 FPS @ 320×240 pixels(NTSC) 200 FPS @ 320×288 pixels(PAL)
Storage	SATA HDDs	Support 3.5" SATA HDD*1 (up to 32TB each port)
	External Storage Expansion	eSATA interface (support 32TB RAID)
Backup	Back up Device	USB 2.0 drive, DVD, Network
Network	Operation System for network function	Windows 2000/XP/Vista/7, Linux, and MAC(option)
	Protocol	TCP/IP, PPPoE, DHCP and Free 2SAN DDNS (Dynamic IP)
	Network Alarm Notification	E-mail
	Support remote control and live view	option
	Support 3G mobile surveillance	option
	Support CMS	option
Other Function	Mulitiplex Operation	Live / record / playback / backup / network
	Motion Detection Area	22 × 15 grids per channel
	Motion Detection Sensitivity	16 level
	Daylight Saving	Yes
	Pre-Record	20MB
	Key Lock(Password Protection)	Yes
	Video Loss Detection	Yes
	Camera Title	up to 10 letters
	IR Remote & Mouse Control	Yes
	Jog & Shuttle	No
	PTZ Control	Yes (Pelco-D, Pelco-P...)
	Watchdog function	Yes
	Operation temperature	10 – 45 degree C
	Dimensions(mm)	345(W) x 61(H) x 327(D) mm
	Power Consumption	DC 19V, <48W

** The specifications are subject to change without notice*

Advanced H.264 Series

4CH H.264 4D1 Standalone DVR

ADR-7604H CMS D1 eSATA 3G H.264

Features

- H.264 compression technology
  - 1 Year recording time
- Support SATA/ eSATA high capacity storage
  - SATA HDD (up to 32TB each port)
  - eSATA RAID (up to 32TB each port)
- De-Interlace technology
- VGA output
  - Support 1280 x 1024 resolution
  - Support 4:3 & 16:9 monitor display without distortion
- Pentaplex
  - Live, playback, record, backup & network
- Independent channel record resolution, quality & fps adjustment
- Free F/W upgrade to advanced function
- Support USB 2.0 drive, CF card, DVD, Network for video backup
- Advanced network function
  - Remote control & monitoring via web browser
  - 3G mobile surveillance
  - CMS
- Support multiple recording modes
  - Manual, motion detection, alarm trigger, always, schedule
- Support graphic user interface & multi-language OSD
- Support IR remote & mouse control
- Support watchdog function (Hardware)

Rear panel

Specifications

Video	Video System	NTSC / PAL
	Video Compression Format	H.264
	Video Input	4 (BNC)
	Video Output	4 (BNC)
	Main monitor out	BNC*1, VGA*1
	Call monitor out	BNC*1
	Display Mode	Full, 4
Audio	Audio In	4
	Audio Out	1
Alarm	Alarm in	4
	Alarm out	1
Record	Max Recording Rate(D1)	120 FPS @ 720×480 pixels(NTSC) 100 FPS @ 720×576 pixels(PAL)
	Max Recording Rate(Half-D1)	120 FPS @ 720×240 pixels(NTSC) 100 FPS @ 720×288 pixels(PAL)
	Max Recording Rate(CIF)	120 FPS @ 320×240 pixels(NTSC) 100 FPS @ 320×288 pixels(PAL)
	Max Recording Rate(D1/ Half-D1/CIF)	480 FPS @ 320×240 pixels(NTSC) 400 FPS @ 320×288 pixels(PAL)
Storage	SATA HDDs	Support 3.5" SATA HDD*1 (up to 32TB each port)
	External Storage Expansion	eSATA interface (support 32TB RAID)
Backup	Back up Device	USB 2.0 drive, DVD, Network, CF Card
Network	Operation System for network function	Windows 2000/XP/Vista/7, Linux, and MAC(option)
	Protocol	TCP/IP, PPPoE, DHCP and Free 2SAN DDNS (Dynamic IP)
	Network Alarm Notification	E-mail
	Support remote control and live view	Yes
	Support 3G mobile surveillance	Yes
	Support CMS	Yes
Other Function	Mulitiplex Operation	Live / record / playback / backup / network
	Motion Detection Area	22 × 15 grids per channel
	Motion Detection Sensitivity	16 level
	Daylight Saving	Yes
	Pre-Record	20MB
	Key Lock(Password Protection)	Yes
	Video Loss Detection	Yes
	Camera Title	up to 10 letters
	IR Remote & Mouse Control	Yes
	Jog & Shuttle	No
	PTZ Control	Yes (Pelco-D, Pelco-P...)
	Watchdog function	Yes
	Operation temperature	10 – 45 degree C
	Dimensions(mm)	195(W) x 65(H) x 183(D) mm
	Power Consumption	DC 19V, <48W

** The specifications are subject to change without notice*

Advanced H.264 Series

4CH H.264 4D1 Standalone DVR

ADR-7604HC CMS (option) D1 eSATA 3G H.264

Features

- H.264 compression technology
  - 1 Year recording time
- Support SATA/ eSATA high capacity storage
  - SATA HDD (up to 32TB each port)
  - eSATA RAID (up to 32TB each port)
- De-Interlace technology
- VGA output
  - Support 1280 x 1024 resolution
  - Support 4:3 & 16:9 monitor display without distortion
- Pentaplex
  - Live, playback, record, backup & network
- Independent channel record resolution, quality & fps adjustment
- Free F/W upgrade to advanced function
- Support USB 2.0 drive, CF card, DVD, Network for video backup
- Advanced network function
  - Remote control & monitoring via web browser
  - 3G mobile surveillance
  - CMS
- Support multiple recording modes
  - Manual, motion detection, alarm trigger, always, schedule
- Support graphic user interface & multi-language OSD
- Support IR remote & mouse control
- Support watchdog function (Hardware)

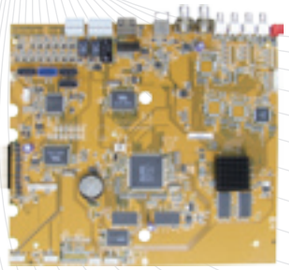
Rear panel

Specifications

Video	Video System	NTSC / PAL
	Video Compression Format	H.264
	Video Input	4 (BNC)
	Video Output	4 (BNC)
	Main monitor out	BNC*1, VGA*1
	Call monitor out	BNC*1
	Display Mode	Full, 4
Audio	Audio In	4
	Audio Out	1
Alarm	Alarm in	4
	Alarm out	1
Record	Max Recording Rate(D1)	120 FPS @ 720×480 pixels(NTSC) 100 FPS @ 720×576 pixels(PAL)
	Max Recording Rate(Half-D1)	120 FPS @ 720×240 pixels(NTSC) 100 FPS @ 720×288 pixels(PAL)
	Max Recording Rate(CIF)	120 FPS @ 320×240 pixels(NTSC) 100 FPS @ 320×288 pixels(PAL)
	Max Recording Rate(D1/ Half-D1/CIF)	480 FPS @ 320×240 pixels(NTSC) 400 FPS @ 320×288 pixels(PAL)
Storage	SATA HDDs	Support 3.5" SATA HDD*1 (up to 32TB each port)
	External Storage Expansion	eSATA interface (support 32TB RAID)
Backup	Back up Device	USB 2.0 drive, DVD, Network
Network	Operation System for network function	Windows 2000/XP/Vista/7, Linux, and MAC(option)
	Protocol	TCP/IP, PPPoE, DHCP and Free 2SAN DDNS (Dynamic IP)
	Network Alarm Notification	E-mail
	Support remote control and live view	Yes
	Support 3G mobile surveillance	Yes
	Support CMS	Yes
Other Function	Mulitiplex Operation	Live / record / playback / backup / network
	Motion Detection Area	22 × 15 grids per channel
	Motion Detection Sensitivity	16 level
	Daylight Saving	Yes
	Pre-Record	20MB
	Key Lock(Password Protection)	Yes
	Video Loss Detection	Yes
	Camera Title	up to 10 letters
	IR Remote & Mouse Control	Yes
	Jog & Shuttle	No
	PTZ Control	Yes (Pelco-D, Pelco-P...)
	Watchdog function	Yes
	Operation temperature	10 – 45 degree C
	Dimensions(mm)	345(W) x 61(H) x 327(D) mm
	Power Consumption	DC 19V, <48W

** The specifications are subject to change without notice*

Professional H.264 Series



4CH H.264 4D1 Standalone DVR

ADR-7604P

CMS (option) | D1 | eSATA | 3G | H.264

Features

- H.264 compression technology
  - 1 Year recording time
- Support SATA/ eSATA high capacity storage
  - SATA HDD(up to 32TB each port),
  - eSATA RAID(up to 32TB)
  - HDD Hot swap module(option)
- De-Interlace technology
- VGA output
  - Support 1280 x 1024 resolution
  - Support 4:3 & 16:9 monitor display without distortion
- Pentaplex
  - Live, playback, record, backup & network
- Independent channel record resolution, quality & fps adjustment
- Free F/W upgrade to advanced function
- Support USB 2.0 drive, CF card, DVD, Network for video backup
- Advanced network function
  - Remote control & monitoring via web browser
  - 3G mobile surveillance
  - CMS(option)
- Support multiple recording modes
  - Manual, motion detection, alarm trigger, always, schedule
- Support graphic user interface & multi-language OSD
- Support IR remote & mouse control
- Support watchdog function(Hardware)

Rear panel

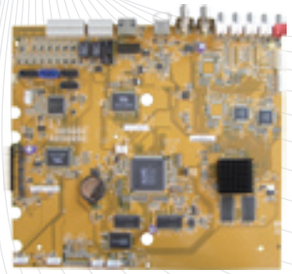
Specifications

Video	Video System	NTSC / PAL
	Video Compression Format	H.264
	Video Input	4 (BNC)
	Video Output	4 (BNC)
	Main monitor out	BNC*1, VGA*1, S-Video*1
	Call monitor out	BNC*1
	Display Mode	Full, 4
Audio	Audio In	4
	Audio Out	1
Alarm	Alarm in	4
	Alarm out	2
Record	Max Recording Rate(D1)	120 FPS @ 720×480 pixels(NTSC) 100 FPS @ 720×576 pixels(PAL)
	Max Recording Rate(Half-D1)	120 FPS @ 720×240 pixels(NTSC) 100 FPS @ 720×288 pixels(PAL)
	Max Recording Rate(CIF)	120 FPS @ 320×240 pixels(NTSC) 100 FPS @ 320×288 pixels(PAL)
	Max Recording Rate(D1/ Half-D1/CIF)	480 FPS @ 320×240 pixels(NTSC) 400 FPS @ 320×288 pixels(PAL)
Storage	SATA HDDs	Support 3.5" SATA HDD*3 (up to 32TB each port)
	External Storage Expansion	eSATA interface (support 32TB RAID)
Backup	Back up Device	USB 2.0 drive, DVD, Network, CF Card
Network	Operation System for network function	Windows 2000/XP/Vista/7, Linux, and MAC(option)
	Protocol	TCP/IP, PPPoE, DHCP and Free 2SAN DDNS (Dynamic IP)
	Network Alarm Notification	E-mail
	Support remote control and live view	Yes
	Support 3G mobile surveillance	Yes
	Support CMS	Yes
Other Function	Mulitiplex Operation	Live / record / playback / backup / network
	Motion Detection Area	22 × 15 grids per channel
	Motion Detection Sensitivity	16 level
	Daylight Saving	Yes
	Pre-Record	20MB
	Key Lock(Password Protection)	Yes
	Video Loss Detection	Yes
	Camera Title	up to 10 letters
	IR Remote & Mouse Control	Yes
	Jog & Shuttle	Yes
	PTZ Control	Yes (Pelco-D, Pelco-P...)
	Watchdog function	Yes
	Operation temperature	10 – 45 degree C
	Dimensions(mm)	430(W) x 88(H) x 263(D) mm
	Power Consumption	DC 19V, <48W

** The specifications are subject to change without notice*

DVR

Smart H.264 Series



8CH H.264 4D1 Standalone DVR

ADR-7608CA

CMS (option) | D1 | eSATA | 3G | H.264

Features

- H.264 compression technology
  - 1 Year Recording time
- Support SATA/ eSATA high capacity storage
  - SATA HDD (up to 32TB each port)
  - eSATA RAID (up to 32TB)
- De-Interlace technology
- VGA output
  - Support 1280 x 1024 resolution
  - Support 4:3 & 16:9 monitor display without distortion
- Pentaplex
  - Live, playback, record, backup & network
- Independent channel record resolution, quality & fps adjustment
- Free F/W upgrade to advanced function
- Support USB 2.0 drive, DVD & Network for video backup
- Advanced network function
  - Remote control & monitoring via web browser
  - 3G mobile surveillance
  - CMS (option)
- Support multiple recording modes
  - Manual, motion detection, alarm trigger, always & schedule
- Support graphic user interface & multi-language OSD
- Support IR remote & mouse control
- Support watchdog function (Hardware)

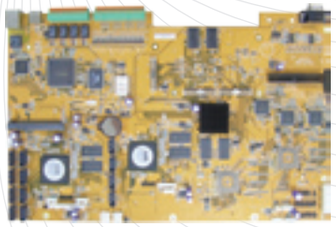
Rear panel

Specifications

Video	Video System	NTSC / PAL
	Video Compression Format	H.264
	Video Input	4 (BNC)
	Video Output	4 (BNC)
	Main monitor out	BNC*1, VGA*1, S-Video*1
	Call monitor out	BNC*1
	Display Mode	Full, 4
Audio	Audio In	4
	Audio Out	1
Alarm	Alarm in	4
	Alarm out	2
Record	Max Recording Rate(D1)	120 FPS @ 720×480 pixels(NTSC) 100 FPS @ 720×576 pixels(PAL)
	Max Recording Rate(Half-D1)	240 FPS @ 720×240 pixels(NTSC) 200 FPS @ 720×288 pixels(PAL)
	Max Recording Rate(CIF)	240 FPS @ 320×240 pixels(NTSC) 200 FPS @ 320×288 pixels(PAL)
	Max Recording Rate(D1/ Half-D1/CIF)	480 FPS @ 320×240 pixels(NTSC) 400 FPS @ 320×288 pixels(PAL)
Storage	SATA HDDs	Support 3.5" SATA HDD*3 (up to 32TB each port)
	External Storage Expansion	eSATA interface (support 32TB RAID)
Backup	Back up Device	USB 2.0 drive, DVD, Network
Network	Operation System for network function	Windows 2000/XP/Vista/7, Linux, and MAC(option)
	Protocol	TCP/IP, PPPoE, DHCP and Free 2SAN DDNS (Dynamic IP)
	Network Alarm Notification	E-mail
	Support remote control and live view	Yes
	Support 3G mobile surveillance	Yes
	Support CMS	Yes
Other Function	Mulitiplex Operation	Live / record / playback / backup / network
	Motion Detection Area	22 × 15 grids per channel
	Motion Detection Sensitivity	16 level
	Daylight Saving	Yes
	Pre-Record	20MB
	Key Lock(Password Protection)	Yes
	Video Loss Detection	Yes
	Camera Title	up to 10 letters
	IR Remote & Mouse Control	Yes
	Jog & Shuttle	Yes
	PTZ Control	Yes (Pelco-D, Pelco-P...)
	Watchdog function	Yes
	Operation temperature	10 – 45 degree C
	Dimensions(mm)	430(W) x 88(H) x 263(D) mm
	Power Consumption	DC 19V, <48W

** The specifications are subject to change without notice*

Professional H.264 Series



8CH H.264 8D1 Standalone DVR

ADR-7608P

CMS (option) | D1 | eSATA | 3G | H.264

Features

- H.264 compression technology
  - 1 Year Recording time
- Support SATA/ eSATA high capacity storage
  - SATA HDD(up to 32TB each port)
  - eSATA RAID (up to 32TB)
  - HDD Hot swap module(option)
- De-Interlace technology
- VGA output
  - Support 1280 x 1024 resolution
  - Support 4:3 & 16:9 monitor display without distortion
- Pentaplex
  - Live, playback, record, backup & network
- Independent channel record resolution, quality & fps adjustment
- Free F/W upgrade to advanced function
- Support USB 2.0 drive, CF Card, DVD & Network for video backup
- Advanced network function
  - Remote control & monitoring via web browser
  - 3G mobile surveillance
  - CMS (option)
- Support multiple recording modes
  - Manual, motion detection, alarm trigger, always & schedule
- Support graphic user interface & multi-language OSD
- Support IR remote & mouse control
- Support watchdog function (Hardware)

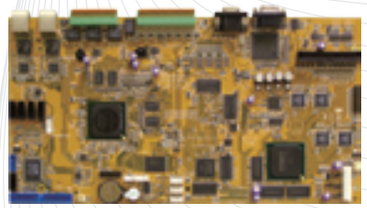
Rear panel

Specifications

Video	Video System	NTSC / PAL
	Video Compression Format	H.264
	Video Input	8 (BNC)
	Video Output	8 (BNC)
	Main monitor out	BNC*1, VGA*1, S-Video*1, HDMI*1(option)
	Call monitor out	BNC*1
	Display Mode	Full, 4, 8, 9
Audio	Audio In	8
	Audio Out	2
Alarm	Alarm in	8
	Alarm out	2
Record	Max Recording Rate(D1)	240 FPS @ 720×480 pixels(NTSC) 200 FPS @ 720×576 pixels(PAL)
	Max Recording Rate(Half-D1)	240 FPS @ 720×240 pixels(NTSC) 200 FPS @ 720×288 pixels(PAL)
	Max Recording Rate(CIF)	240 FPS @ 320×240 pixels(NTSC) 200 FPS @ 320×288 pixels(PAL)
	Max Recording Rate(D1/ Half-D1/CIF)	960 FPS @ 320×240 pixels(NTSC) 800 FPS @ 320×288 pixels(PAL)
Storage	SATA HDDs	Support 3.5" SATA HDD*3 (up to 32TB each port)
	External Storage Expansion	eSATA interface (support 32TB RAID)
Backup	Back up Device	USB 2.0 drive, DVD, Network, CF Card
Network	Operation System for network function	Windows 2000/XP/Vista/7, Linux, and MAC(option)
	Protocol	TCP/IP, PPPoE, DHCP and Free 2SAN DDNS (Dynamic IP)
	Network Alarm Notification	E-mail
	Support remote control and live view	Yes
	Support 3G mobile surveillance	Yes
	Support CMS	Yes
Other Function	Mulitiplex Operation	Live / record / playback / backup / network
	Motion Detection Area	22 × 15 grids per channel
	Motion Detection Sensitivity	16 level
	Daylight Saving	Yes
	Pre-Record	20MB
	Key Lock(Password Protection)	Yes
	Video Loss Detection	Yes
	Camera Title	up to 10 letters
	IR Remote & Mouse Control	Yes
	Jog & Shuttle	Yes
	PTZ Control	Yes (Pelco-D, Pelco-P...)
	Watchdog function	Yes
	Operation temperature	10 – 45 degree C
	Dimensions(mm)	430(W) x 88(H) x 473(D) mm
	Power Consumption	DC 19V, <84W

** The specifications are subject to change without notice*

Professional H.264 Series



16CH H.264 4D1 Standalone DVR

ADR-7616 CMS D1 SERIAL ATA 3G H.264

Features

- H.264 compression technology
  - 1 Year Recording time
- Support SATA/ eSATA high capacity storage
  - SATA HDD(up to 32TB each port)
  - eSATA RAID (up to 32TB)
- De-Interlace technology
- VGA output
  - Support 1280 x 1024 resolution
  - Support 4:3 & 16:9 monitor display without distortion
- Pentaplex
  - Live, playback, record, backup & network
- Independent channel record resolution, quality & fps adjustment
- Free F/W upgrade to advanced function
- Support USB 2.0 drive, DVD & Network for video backup
- Advanced network function
  - Remote control & monitoring via web browser
  - 3G mobile surveillance
  - CMS
- Support multiple recording modes
  - Manual, motion detection, alarm trigger, always & schedule
- Support graphic user interface & multi-language OSD
- Support IR remote & mouse control
- Support watchdog function (Hardware)

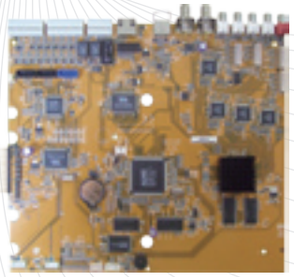
Rear panel

Specifications

Video	Video System	NTSC / PAL
	Video Compression Format	H.264
	Video Input	16 (BNC)
	Video Output	16 (BNC)
	Main monitor out	BNC*2, VGA*1, S-Video*1
	Call monitor out	BNC*1
	Display Mode	Full, 4, 8, 9, 16
Audio	Audio In	16
	Audio Out	2
Alarm	Alarm in	16
	Alarm out	4
Record	Max Recording Rate(D1)	120 FPS @ 720×480 pixels(NTSC) 100 FPS @ 720×576 pixels(PAL)
	Max Recording Rate(Half-D1)	240 FPS @ 720×240 pixels(NTSC) 200 FPS @ 720×288 pixels(PAL)
	Max Recording Rate(CIF)	480 FPS @ 320×240 pixels(NTSC) 400 FPS @ 320×288 pixels(PAL)
	Max Recording Rate(D1/ Half-D1/CIF)	480 FPS @ 320×240 pixels(NTSC) 400 FPS @ 320×288 pixels(PAL)
Storage	SATA HDDs	Support 3.5" SATA HDD*3 (up to 32TB each port)
	External Storage Expansion	eSATA interface (support 32TB RAID)
Backup	Back up Device	USB 2.0 drive, DVD, Network
Network	Operation System for network function	Windows 2000/XP/Vista/7, Linux, and MAC(option)
	Protocol	TCP/IP, PPPoE, DHCP and Free 2SAN DDNS (Dynamic IP)
	Network Alarm Notification	E-mail
	Support remote control and live view	Yes
	Support 3G mobile surveillance	Yes
	Support CMS	Yes
Other Function	Mulitiplex Operation	Live / record / playback / backup / network
	Motion Detection Area	22 × 15 grids per channel
	Motion Detection Sensitivity	4 level
	Daylight Saving	Yes
	Pre-Record	20MB
	Key Lock(Password Protection)	Yes
	Video Loss Detection	Yes
	Camera Title	up to 10 letters
	IR Remote & Mouse Control	Yes
	Jog & Shuttle	Yes
	PTZ Control	Yes (Pelco-D, Pelco-P...)
	Watchdog function	Yes
	Operation temperature	10 – 45 degree C
	Dimensions(mm)	430(W) x 88(H) x 365(D) mm
	Power Consumption	DC 19V, <96W

** The specifications are subject to change without notice*

Smart H.264 Series



16CH H.264 4D1 Standalone DVR

ADR-7616CA CMS D1 eSATA 3G H.264

Features

- H.264 compression technology
  - 1 Year recording time
- Support SATA/ eSATA high capacity storage
  - SATA HDD (up to 32TB each port)
  - eSATA RAID (up to 32TB)
- De-Interlace technology
- VGA output
  - Support 1280 x 1024 resolution
  - Support 4:3 & 16:9 monitor display without distortion
- Pentaplex
  - Live, playback, record, backup & network
- Independent channel record resolution, quality & fps adjustment
- Free F/W upgrade to advanced function
- Support USB 2.0 drive, DVD & Network for video backup
- Advanced network function
  - Remote control & monitoring via web browser
  - 3G mobile surveillance
  - CMS(option)
- Support multiple recording modes
  - Manual,motion detection,alarm trigger,always & schedule
- Support graphic user interface & multi-language OSD
- Support IR remote & mouse control
- Support watchdog function (Hardware)

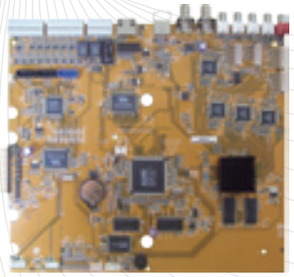
Rear panel

Specifications

Video	Video System	NTSC / PAL
	Video Compression Format	H.264
	Video Input	16 (BNC)
	Video Output	16 (BNC)
	Main monitor out	BNC*1, VGA*1, S-Video*1
	Call monitor out	BNC*1
	Display Mode	Full, 4, 8, 9, 16
Audio	Audio In	4
	Audio Out	1
Alarm	Alarm in	16
	Alarm out	2
Record	Max Recording Rate(D1)	120 FPS @ 720×480 pixels(NTSC) 100 FPS @ 720×576 pixels(PAL)
	Max Recording Rate(Half-D1)	240 FPS @ 720×240 pixels(NTSC) 200 FPS @ 720×288 pixels(PAL)
	Max Recording Rate(CIF)	480 FPS @ 320×240 pixels(NTSC) 400 FPS @ 320×288 pixels(PAL)
	Max Recording Rate(D1/ Half-D1/CIF)	480 FPS @ 320×240 pixels(NTSC) 400 FPS @ 320×288 pixels(PAL)
Storage	SATA HDDs	Support 3.5" SATA HDD*3 (up to 32TB each port)
	External Storage Expansion	eSATA interface (support 32TB RAID)
Backup	Back up Device	USB 2.0 drive, DVD, Network
Network	Operation System for network function	Windows 2000/XP/Vista/7, Linux, and MAC(option)
	Protocol	TCP/IP, PPPoE, DHCP and Free 2SAN DDNS (Dynamic IP)
	Network Alarm Notification	E-mail
	Support remote control and live view	Yes
	Support 3G mobile surveillance	Yes
	Support CMS	Yes
Other Function	Mulitiplex Operation	Live / record / playback / backup / network
	Motion Detection Area	22 × 15 grids per channel
	Motion Detection Sensitivity	16 level
	Daylight Saving	Yes
	Pre-Record	20MB
	Key Lock(Password Protection)	Yes
	Video Loss Detection	Yes
	Camera Title	up to 10 letters
	IR Remote & Mouse Control	Yes
	Jog & Shuttle	No
	PTZ Control	Yes (Pelco-D, Pelco-P...)
	Watchdog function	Yes
	Operation temperature	10 – 45 degree C
	Dimensions(mm)	430(W) x 88(H) x 263(D) mm
	Power Consumption	DC 19V, <84W

** The specifications are subject to change without notice*

Advanced H.264 Series



16CH H.264 4D1 Standalone DVR

ADR-7616SA CMS D1 eSATA 3G H.264

Features

- H.264 compression technology
  - 1 Year recording time
- Support SATA/ eSATA high capacity storage
  - SATA HDD(up to 32TB each port)
  - eSATA RAID(up to 32TB)
  - HDD Hot swap module(option)
- De-Interlace technology
- VGA output
  - Support 1280 x 1024 resolution
  - Support 4:3 & 16:9 monitor display without distortion
- Pentaplex
  - Live, playback, record, backup & network
- Independent channel record resolution, quality & fps adjustment
- Free F/W upgrade to advanced function
- Support USB 2.0 drive, CF Card, DVD & Network for video backup
- Advanced network function
  - Remote control & monitoring via web browser
  - 3G mobile surveillance
  - CMS(option)
- Support multiple recording modes
  - Manual, motion detection, alarm trigger, always & schedule
- Support graphic user interface & multi-language OSD
- Support IR remote & mouse control
- Support watchdog function(Hardware)

Rear panel

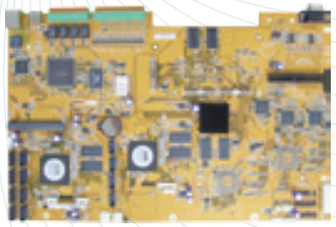
Specifications

Video	Video System	NTSC / PAL
	Video Compression Format	H.264
	Video Input	16 (BNC)
	Video Output	16 (BNC)
	Main monitor out	BNC*1, VGA*1, S-Video*1
	Call monitor out	BNC*1
	Display Mode	Full, 4, 8, 9, 16
Audio	Audio In	4
	Audio Out	1
Alarm	Alarm in	16
	Alarm out	2
Record	Max Recording Rate(D1)	120 FPS @ 720×480 pixels(NTSC) 100 FPS @ 720×576 pixels(PAL)
	Max Recording Rate(Half-D1)	240 FPS @ 720×240 pixels(NTSC) 200 FPS @ 720×288 pixels(PAL)
	Max Recording Rate(CIF)	480 FPS @ 320×240 pixels(NTSC) 400 FPS @ 320×288 pixels(PAL)
	Max Recording Rate(D1/ Half-D1/CIF)	480 FPS @ 320×240 pixels(NTSC) 400 FPS @ 320×288 pixels(PAL)
Storage	SATA HDDs	Support 3.5" SATA HDD*3 (up to 32TB each port)
	External Storage Expansion	eSATA interface (support 32TB RAID)
Backup	Back up Device	USB 2.0 drive, DVD, Network, CF Card
Network	Operation System for network function	Windows 2000/XP/Vista/7, Linux, and MAC(option)
	Protocol	TCP/IP,PPPoE,DHCP and Free 2SAN DDNS (Dynamic IP)
	Network Alarm Notification	E-mail
	Support remote control and live view	Yes
	Support 3G mobile surveillance	Yes
	Support CMS	Yes
Other Function	Mulitiplex Operation	Live / record / playback / backup / network
	Motion Detection Area	22 × 15 grids per channel
	Motion Detection Sensitivity	16 level
	Daylight Saving	Yes
	Pre-Record	20MB
	Key Lock(Password Protection)	Yes
	Video Loss Detection	Yes
	Camera Title	up to 10 letters
	IR Remote & Mouse Control	Yes
	Jog & Shuttle	Yes
	PTZ Control	Yes (Pelco-D, Pelco-P...)
	Watchdog function	Yes
	Operation temperature	10 – 45 degree C
	Dimensions(mm)	430(W) x 88(H) x 263(D) mm
	Power Consumption	DC 19V, <84W

** The specifications are subject to change without notice*

DVR

Professional H.264 Series



16CH H.264 8D1 Standalone DVR

ADR-7616D CMS D1 eSATA 3G H.264

Features

- H.264 compression technology
  - 1 Year recording time
- Support SATA/ eSATA high capacity storage
  - SATA HDD(up to 32TB each port)
  - eSATA RAID(up to 32TB)
  - HDD Hot swap module(option)
- De-Interlace technology
- VGA output
  - Support 1280 x 1024 resolution
  - Support 4:3 & 16:9 monitor display without distortion
- Pentaplex
  - Live, playback, record, backup & network
- Independent channel record resolution, quality & fps adjustment
- Free F/W upgrade to advanced function
- Support USB 2.0 drive, CF Card, DVD & Network for video backup
- Advanced network function
  - Remote control & monitoring via web browser
  - 3G mobile surveillance
  - CMS(option)
- Support multiple recording mode
  - Manual, motion detection, alarm trigger, always & schedule
- Support graphic user interface & multi-language OSD
- Support IR remote & mouse control
- Support watchdog function(Hardware)

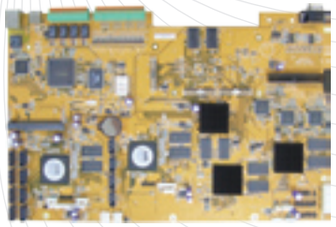
Rear panel

Specifications

Video	Video System	NTSC / PAL
	Video Compression Format	H.264
	Video Input	16 (BNC)
	Video Output	16 (BNC)
	Main monitor out	BNC*1, VGA*1, S-Video*1, HDMI*1(option)
	Call monitor out	BNC*1
	Display Mode	Full, 4, 8, 9, 16
Audio	Audio In	16
	Audio Out	2
Alarm	Alarm in	16
	Alarm out	4
Record	Max Recording Rate(D1)	240 FPS @ 720×480 pixels(NTSC) 200 FPS @ 720×576 pixels(PAL)
	Max Recording Rate(Half-D1)	480 FPS @ 720×240 pixels(NTSC) 400 FPS @ 720×288 pixels(PAL)
	Max Recording Rate(CIF)	480 FPS @ 320×240 pixels(NTSC) 400 FPS @ 320×288 pixels(PAL)
	Max Recording Rate(D1/ Half-D1/CIF)	960 FPS @ 320×240 pixels(NTSC) 800 FPS @ 320×288 pixels(PAL)
Storage	SATA HDDs	Support 3.5" SATA HDD*3 (up to 32TB each port)
	External Storage Expansion	eSATA interface (support 32TB RAID)
Backup	Back up Device	USB 2.0 drive, DVD, Network, CF Card
Network	Operation System for network function	Windows 2000/XP/Vista/7, Linux, and MAC(option)
	Protocol	TCP/IP, PPPoE, DHCP and Free 2SAN DDNS (Dynamic IP)
	Network Alarm Notification	E-mail
	Support remote control and live view	Yes
	Support 3G mobile surveillance	Yes
	Support CMS	Yes
Other Function	Mulitiplex Operation	Live / record / playback / backup / network
	Motion Detection Area	22 × 15 grids per channel
	Motion Detection Sensitivity	16 level
	Daylight Saving	Yes
	Pre-Record	20MB
	Key Lock(Password Protection)	Yes
	Video Loss Detection	Yes
	Camera Title	up to 10 letters
	IR Remote & Mouse Control	Yes
	Jog & Shuttle	Yes
	PTZ Control	Yes (Pelco-D, Pelco-P...)
	Watchdog function	Yes
	Operation temperature	10 – 45 degree C
	Dimensions(mm)	430(W) x 88(H) x 473(D) mm
	Power Consumption	DC 19V, <96W

** The specifications are subject to change without notice*

Professional H.264 Series



16CH H.264 16D1 Standalone DVR

ADR-7616P CMS D1 SERIAL ATA 3G H.264

Features

- H.264 compression technology
  - 1 Year recording time
- Support SATA/ eSATA high capacity storage
  - SATA HDD(up to 32TB each port)
  - eSATA RAID(up to 32TB)
  - HDD Hot swap module(option)
- De-Interlace technology
- VGA output
  - Support 1280 x 1024 resolution
  - Support 4:3 & 16:9 monitor display without distortion
- Pentaplex
  - Live, playback, record, backup & network
- Independent channel record resolution, quality & fps adjustment
- Free F/W upgrade to advanced function
- Support USB 2.0 drive, CF Card, DVD & Network for video backup
- Advanced network function
  - Remote control & monitoring via web browser
  - 3G mobile surveillance
  - CMS(option)
- Support multiple recording modes
  - Manual, motion detection, alarm trigger, always & schedule
- Support graphic user interface & multi-language OSD
- Support IR remote & mouse control
- Support watchdog function(Hardware)

Rear panel

Specifications

Video	Video System	NTSC / PAL
	Video Compression Format	H.264
	Video Input	16 (BNC)
	Video Output	16 (BNC)
	Main monitor out	BNC*1, VGA*1, S-Video*1, HDMI*1(option)
	Call monitor out	BNC*1
	Display Mode	Full, 4, 8, 9, 16
Audio	Audio In	16
	Audio Out	2
Alarm	Alarm in	16
	Alarm out	4
Record	Max Recording Rate(D1)	480 FPS @ 720×480 pixels(NTSC) 400 FPS @ 720×576 pixels(PAL)
	Max Recording Rate(Half-D1)	480 FPS @ 720×240 pixels(NTSC) 400 FPS @ 720×288 pixels(PAL)
	Max Recording Rate(CIF)	480 FPS @ 320×240 pixels(NTSC) 400 FPS @ 320×288 pixels(PAL)
	Max Recording Rate(D1/ Half-D1/CIF)	1920 FPS @ 320×240 pixels(NTSC) 1600 FPS @ 320×288 pixels(PAL)
Storage	SATA HDDs	Support 3.5" SATA HDD*3 (up to 32TB each port)
	External Storage Expansion	eSATA interface (support 32TB RAID)
Backup	Back up Device	USB 2.0 drive, DVD, Network, CF Card
Network	Operation System for network function	Windows 2000/XP/Vista/7, Linux, and MAC(option)
	Protocol	TCP/IP, PPPoE, DHCP and Free 2SAN DDNS (Dynamic IP)
	Network Alarm Notification	E-mail
	Support remote control and live view	Yes
	Support 3G mobile surveillance	Yes
	Support CMS	Yes
Other Function	Mulitiplex Operation	Live / record / playback / backup / network
	Motion Detection Area	22 × 15 grids per channel
	Motion Detection Sensitivity	16 level
	Daylight Saving	Yes
	Pre-Record	20MB
	Key Lock(Password Protection)	Yes
	Video Loss Detection	Yes
	Camera Title	up to 10 letters
	IR Remote & Mouse Control	Yes
	Jog & Shuttle	Yes
	PTZ Control	Yes (Pelco-D, Pelco-P...)
	Watchdog function	Yes
	Operation temperature	10 – 45 degree C
	Dimensions(mm)	430(W) x 88(H) x 473(D) mm
	Power Consumption	DC 19V, <96W

** The specifications are subject to change without notice*

Box Camera Series

Model	ACM-7116	ACM-7125	ACM-7126	ACM-7166	ACM-7070
Signal System	NTSC/ PAL				
Image device	1/3" Sony Super HAD CCD	1/3" Sharp CCD	1/3" Sony Super HAD CCD	1/3" Sony Super HAD CCD II	
Number of Total Pixels	NTSC: 510(H)x592(V) PAL: 560(H)x582(V)	NTSC: 768(H)x494(V) PAL : 752(H)x582(V)		NTSC:811(H)×508(V) PAL :795(H)×596(V)	
Resolution	420TVL	520TVL		540TVL	540TVL or Above (580TVL F1.0)
Mechanical IR-cut filter	-			Yes	-
Auto gain control (AGC)	ON/ OFF				
Back light compensation (BLC)	ON/ OFF				
Auto Electronic shutter	1/50 (60) to 1/100,000 s			AES ON: 1/50 (60) ~1/100,000 s AES OFF: 1/50 (60) s	
S/N Ratio	>48dB	50dB (AGC OFF)	>48dB	>48dB (AGC OFF)	more than 52dB (AGC OFF)
Gamma correction	0.45				
White balance	Automatic				
Scanning mode	2:1 interlace scan				
Lens mount	C/ CS mount				
Minimum illumination	0.5Lux at F1.2	0.1Lux at F1.2		0.08Lux @ F1.0	0.08Lux @ F1.2
Iris Control	Video / DC				
Operation Temperature /Humidity	-10℃~50℃ 30%~80% RH				
Storage Temperature /Humidity	-20℃~60℃ 20%~90% RH				
Dimensions(mm)	168(D)x57(W) x65(H)	125(D) x 55(W) x 47(H)	110(D)x53(W) x60(H)	99(D) x 60(W) x 49(H)	125(D) x 55(W) x 47(H)
Power	DC12V			DC12V /AC24V	DC12V
Camera Picture					

Dome Camera Series

Model	ACM-7205	ACM-7216	ACM-7225	ACM-7310	ACM-7330	ACM-7236
Signal System	NTSC/ PAL					
Image device	1/4" Sony CCD	1/3" Sony CCD	1/3" Sony Super HAD CCD	1/4" Sony Super HAD II CCD	1/3" Sony Super HAD II CCD	1/3" Sony Super HAD CCD
Number of Total Pixels	NTSC: 510(H)x492(V) PAL: 500(H)x582(V)		NTSC: 768(H) x494(V) PAL : 752(H) x582(V)	NTSC: 510(H) x592(V) PAL: 500(H) x582(V)	NTSC: 768(H)x494(V) PAL : 752(H)x582(V)	
Resolution	420TVL		520TVL	420TVL	480TVL	520TVL
Auto gain control (AGC)	ON/ OFF			AUTO		
Back light compensation (BLC)	ON/ OFF			AUTO		
Auto Electronic shutter	1/50 (60) to 1/100,000 s					1/50 (60) to 1/100,000 s, ON/OFF
S/N Ratio	>48dB(AGC OFF)					
Gamma correction	0.45					
White balance	Automatic					
Scanning mode	2:1 interlace scan					
Lens	3.6 mm			4~9 mm Vari-focal Lens		
Lens Type	-			Auto Iris DC lens		
Video output	1VP-P. 75 Ω composite BNC connector					
Minimum illumination	0.1Lux at F1.2		0.05Lux at F1.2	0.1Lux at F1.2		
Iris Control	Video / DC			-		
3-Axis holder construction				Yes		
Operation Temperature /Humidity	-10℃~50℃ 30%~80% RH					
Storage Temperature /Humidity	-20℃~60℃ 20%~90% RH					
Dimensions(mm)	117(Øx75(H)	117(Øx75(H)	98(Ø)x66(H)	128(Øx91(H)	128(Øx91(H)	128(Øx95(H)
Power	DC12V					
Camera Picture						

Dome Camera Series

Model	ACM-7236P	ACM-7246	ACM-7246P	ACM-7270	ACM-7172P
Signal System	NTSC/ PAL				
Image device	1/3" Sony Super HAD CCD	1/3" Sony Super HAD II CCD		1/3" Sony Super HAD CCD	
Number of Total Pixels	NTSC: 768(H)x494(V) PAL : 752(H)x582(V)	NTSC: 795(H)x596(V) PAL : 811(H)x508(V)	NTSC: 795(H)x596(V) PAL : 811(H)x508(V)	NTSC: 768(H)x494(V) PAL : 752(H)x582(V)	NTSC: 768(H)x494(V) PAL : 752(H)x582(V)
Resolution	520TVL	540TVL		540 TV lines or above (580TVL , F1.0)	
Auto gain control (AGC)	AUTO	On/Off		YES	On/Off
Back light compensation (BLC)	AUTO	On/Off		AUTO	AUTO,On/Off
Auto Electronic shutter	1/50 (60) to 1/100,000 s				1/50 (60) to 1/100,000 s, ON/OFF switchable
Flickerless	-	On/Off		-	On/Off
S/N Ratio	≥48dB (AGC OFF)	50dB or more (AGC OFF)	≥48dB (AGC OFF)	52dB	more than52dB (AGC OFF)
Gamma correction	0.45				
D/N	-	Color / D/N		-	
White balance	Automatic				
Dynamic Noise Reduction	-	Automatic		-	
Sense Up	-	Automatic		-	
Scanning mode	2:1 interlace scan				
Lens	4~9 mm Vari-focal Lens			3.6mm Fixed Iris Board Lens	3~9mm(F1.2)
Lens Type	Auto Iris DC lens			-	Auto Iris Lens
Minimum illumination	0.1Lux at F1.2	0.15Lux at F1.2 Color mode automatically switches to B/W mode under 2 Lux	0.1Lux at F1.2	0.05Lux at F1.2	
Video output	1VP-P. 75 Ω composite BNC connector				
Water Resistance	IP66	-	IP66	-	IP66
Mirror	-				Yes
3-Axis holder construction	Yes				
Operation Temperature /Humidity	-10℃~50℃ 30%~80% RH				
Storage Temperature /Humidity	-20℃~60℃ 20%~90% RH				
Dimensions(mm)	128(Ø)x91(H)	118(Ø)x88(H)	39(Ø)x95(H)	108(Ø) x 80(H)	118(Ø)x88(H)
Power	DC12V	DC12V DC12/AC24V	DC12V		DC12V DC12/AC24V
Camera Picture					

IR Camera Series

Model	ACM-7405	ACM-7416	ACM-7426	ACM-7436
Signal System	NTSC/ PAL			
Image device	1/4" Sharp CCD	1/3" Sony CCD	1/3" Sony Super HAD CCD	1/3" Sony Super HAD CCD II
Number of Total Pixels	NTSC: 510(H)x492(V) PAL: 500(H)x582(V)		NTSC: 768(H)x494(V) PAL : 752(H)x582(V)	NTSC: 811(H)×508(V)/ PAL : 795(H)×596(V)
Resolution	420TVL		520TVL	
Auto gain control (AGC)	On/Off		Auto(max 34dB)	Automatic
Auto White Balance	-			Automatic
Back light compensation (BLC)	On/Off		Auto detect	-
Auto Electronic shutter	1/50 (60) to 1/100,000 s			
S/N Ratio	≥48dB(AGC OFF)			More than 50dB (AGC OFF)
Dynamic Noise Reduction	-			Automatic
Sense Up	-			Automatic
Gamma correction	0.45			
White balance	Automatic		Auto (2500K ~ 9500K)	-
Scanning mode	2:1 interlace scan			-
Lens Type	6 mm		4mm	-
Lens/Angle of View	-			Standard : f3.8mm-9.5mm/F1.2 Aspherical D/N lens 74.2° ~30.0°
IR Working Distance	25m		30m	Indoor: 30-50M Outdoor: 25-35M
IR LED	24pcs		36pcs	6 Super High Power Reflection LEDs+24 IR LEDs
Video output	1VP-P. 75 Ω composite BNC connector			1.0Vp-p composite/75 Ohms (BNC connector)
Water Resistance	IP66			
Minimum illumination	0 lux(with IR Led On)			
Operation Temperature /Humidity	-10℃~50℃ 30%~80% RH			
Storage Temperature /Humidity	-20℃~60℃ 20%~90% RH			
Dimensions(mm)	75(Ø)x141		74(Ø)x110	163(L) x 93(Ø) w/o Bracket
Power	DC12V			12VDC / 24 VAC
Power Consumption	-			12VDC: IR on: 7.2W(600mA), IR off: 2.4W(200mA) ; 24VAC: IR on: 7.2W(300mA), IR off: 2.4W(100mA)
Camera Picture				

IR Camera Series

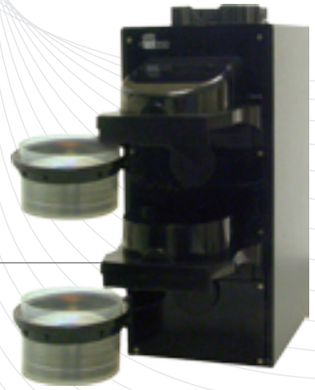
Model	ACM-7526	ACM-7536
Signal System	NTSC/ PAL	
Image device	1/3” Sony Super HAD CCD II	
Number of Total Pixels	NTSC: 768(H)x494(V) PAL : 752(H)x582(V)	
Resolution	540 TV lines or above (580TVL , F1.0)	540TVL
Auto gain control (AGC)	ON/OFF	AUTO
Back light compensation (BLC)	AUTO,ON/OFF	AUTO
Auto Electronic shutter	Auto(1/60(50)～1/100,000); ON/OFF switchable	Auto, 1/50(60) sec.~1/100,000 sec.
S/N Ratio	More than 52dB (AGC OFF)	More than 48dB (AGC OFF)
Gamma correction	0.45	
White balance	ON / OFF ; Color Rolling Reduce switchable	Automatic, 2500˚K~9500˚K
Scanning mode	2:1 interlace scan	
Lens	3～9mm(F1.2) Auto Iris Lens	f4.3mm/F1.6
Minimum illumination	Color mode automatically switches to B/W mode under 5 Lux 0.05 Lux (IR OFF) ; 0 Lux (IR ON)	0Lux w/IR light IR LED on at 2 Lux, controlled by a CDS sensor
Video output	1VP-P. 75 Ω composite BNC connector	
IR Led	24 pcs (IR Wavelength : 850nm)	12pcs
IR Working Distance	20 Meters	10m
Operation Temperature /Humidity	-10˚C~50˚C 30%~80% RH	
Storage Temperature /Humidity	-20˚C~60˚C 20%~90% RH	
Dimensions(mm)	136 (Ø) x 106 (H)	108.5(Ø))×76.6(H)
Power	DC12V	
Camera Picture		

Wide Dynamic Range Camera Series

Model	ACM-7636	ACM-7660
Signal System	NTSC/ PAL	
Image device	1/3” Sony Super HAD CCD II	1/3” WDR Digital Image Sensor
Number of Total Pixels	NTSC: 768(H)x494(V) PAL : 752(H)x582(V)	
Resolution	Color: 540TVL ; B/W: 560TVL	540TVL
Menu	OSD Control	
Dynamic Range	52dB (Low, Middle, High)	120dB
Camera Title	OFF/ON	
Gain control	Low, High, OFF Selectable	AUTO
Back light compensation (BLC)	LOW/MIDDLE/HIGH/OFF Selectable	AUTO
Electronic shutter	ESC (X256, 1/50(60)sec~1/120000 sec)	1/50 (60) to 1/100,000 s,AUTO
S/N Ratio	50dB (γ , Sharpness, AGC OFF)	More than 48dB (AGC OFF)
Flickless	-	ON/OFF
Gamma correction	0.45	
White balance	ATW/AWC/Manual/ Outdoor (1800˚ K~10500˚ K) Indoor (4500~8500K)	Automatic, 2500˚K~9500˚K
Motion Detection	ON/OFF (8 Programmable Zone per Screen)	ON/OFF (4 Programmable Zone per Screen)
Privacy Function	ON/OFF (8 Programmable Zone per Screen)	ON/OFF (6 Programmable Zone per Screen)
Scanning mode	2:1 interlace scan	progressive
Minimum illumination	0.1 Lux/F1.0(color); 0.01Lux/F1.0(B/W); 0.001Lux/F1.0 (Sense-up)	0.03 Lux at F1.4
Video output	1VP-P. 75 Ω composite BNC connector	
Operation Temperature /Humidity	-10˚C~50˚C 30%~80% RH	
Storage Temperature /Humidity	-20˚C~60˚C 20%~90% RH	
Dimensions(mm)	63(W)×52(H)×121(D)	42(W)x42(H)x86.5(D)
Power	DC12V / AC24V	DC12V
Camera Picture		

Camera

Direct Burn System - LightScribe Type



ADR-7601DB

Overview

ADR-7601DB is a direct burn system which is provided with immediate burning/recording of video data from the camera, non-interrupted burning/recording operation of video data, extended time period of preservation of recorded video data, protection against undesired modification of the recorded data, easy filing and management, and timely displaying of data, as well as selective combination with existing hard disc drives can be realized.

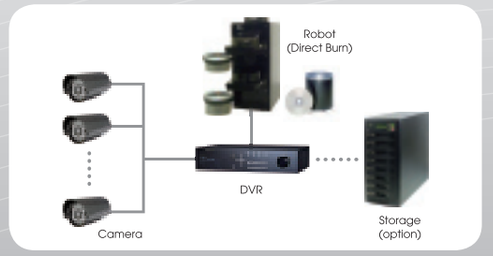
Features

- Direct Burn Patent protection
- Automatic for saving labor cost
- Immediate burning/recording of video data from the camera
- Non-interrupted burning/recording operation of video data
- Extended time period of preservation of recorded video data
- Protection against undesired modification of the recorded data
- Management and organization of the video data files recorded in the burning-completed optic discs are made easy and convenient
- Recording data portable for security
- Protect the video data file from potential risks of malign destruction, stealing, and damage
- Support LightScribe technology for direct disc labeling
- Cover labeling for easy filing and management

Specification

- The 2.5 generation of ACARD 32-bit RISC CPU
- Dual high speed PCI core for video backup
- Active cooling management and overheat protection
- A membrane 4-buttons operation panel with LCD
- Support a built-in 2.5" SATA HDD
- Auto disc loader and up to 200 disc capacity
- Auto-Flip disc for LightScribe labeling without ink supplies required
- Black & White Cover Image
- Cover Image for 2~5years preservation

Direct Burn Procedure



Direct Burn System - Ink Jet Type

ADR-7601TB

Overview

ADR-7601TB is a direct burn system which is provided with immediate burning/recording of video data from the camera, non-interrupted burning/recording operation of video data, extended time period of preservation of recorded video data, protection against undesired modification of the recorded data, easy filing and management, and timely displaying of data, as well as selective combination with existing hard disc drives can be realized.

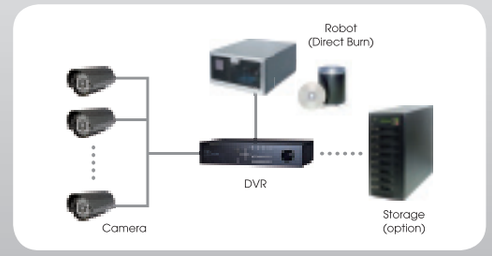
Features

- Direct Burn Patent protection
- Automatic for saving labor cost
- Immediate burning/recording of video data from the camera
- Non-interrupted burning/recording operation of video data
- Extended time period of preservation of recorded video data
- Protection against undesired modification of the recorded data
- Management and organization of the video data files recorded in the burning-completed optic discs are made easy and convenient
- Recording data portable for security
- Protect the video data file from potential risks of malign destruction, stealing, and damage
- Support high resolution direct-to-disc thermal ink jet printer
- Cover labeling for easy filing and management

Specification

- The 2.5 generation of ACARD 32-bit RISC CPU
- Dual high speed PCI core for video backup
- Active cooling management and overheat protection
- 5-buttons with 9 hot keys for easy operation (14keys)
- Support a built-in 2.5" SATA HDD
- Auto disc loader and up to 150 disc capacity
- 6 Color Thermal inkjet (Disc Cover Image loading support)
- Colorful Cover Image
- Cover Image for 5~10years preservation

Direct Burn Procedure



8-Bay eSATA-to-SATA RAID 1 System

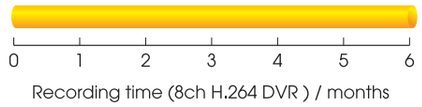
ARS3408M

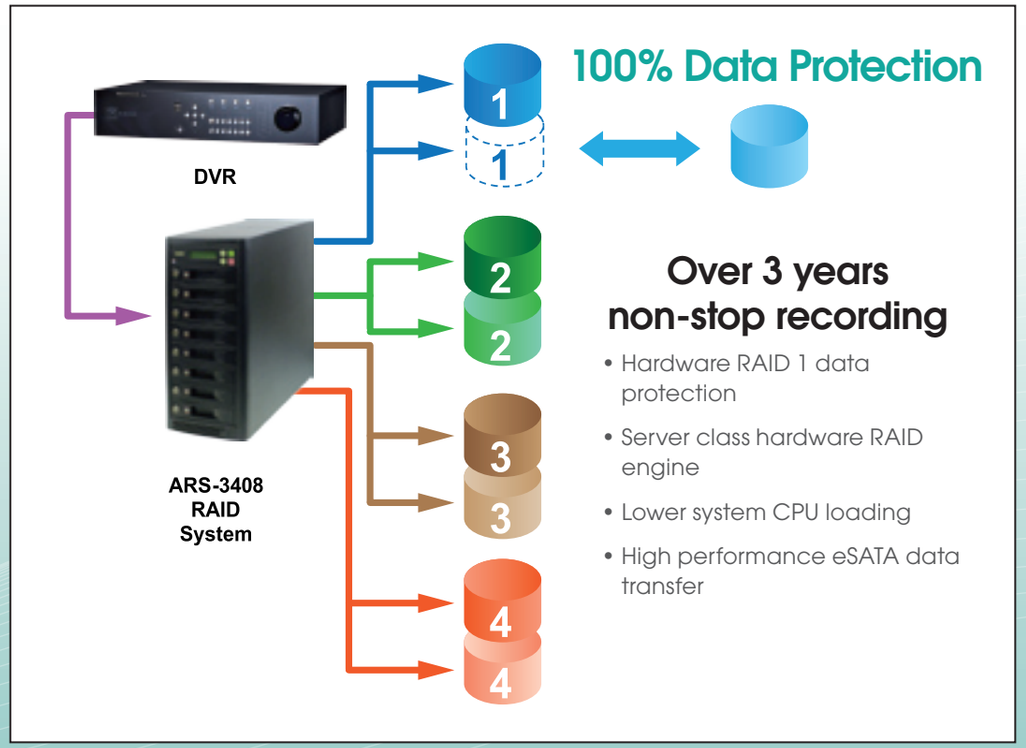
Overview

ARS-3408M series is design to provide a cost-effective big capacity storage for DVR system. They featured one eSATA port and eight 3.5 inches SATA I/II disk space which provides DVR a simple way to expand capacity. With JBOD, and Normal (Non-RAID) mode, users can configure the capacity according to their demand. With RAID 1 mode, ARS3408M allows users to do off-line HDD backup without disrupting recording task. In addition, automatically Fan control is specially good for heat dissipation in long time recording. Friendly LCD control panel together with DVR integrated UI made ARS3408 series becomes best storage solution for all ACARD DVR product lines.

Features

- Easy install with DVR by connecting single eSATA cable
- Supports up to eight SATA hard drives
- Hardware RAID engine reducing CPU loading
- RAID 1 protection (ARS3408M)
- Tool-free HDD installation or maintain
- Friendly LCD UI design reduce operational error
- Compatible with all ACARD DVR system





5-Bay eSATA-to-SATA RAID 5 System

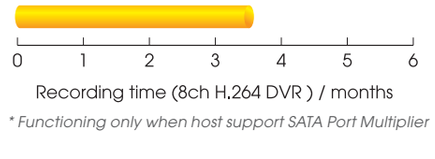
ARS3405R

Overview

ARS3405R is specifically designed for personal DVR storage application. It featured five 3.5 inches SATA I/II disk drives with RAID 0,1,5, JBOD, and Normal (Non-RAID) mode. ARS3405R provide DVR a simple way to expand capacity via an eSATA cable. RAID 5 mode protects valuable image data from HDD failure. Automatic temperature control and aluminum-alloy body design are good for heat dissipation while in long time recording. Friendly LCD control panel together with DVR integrated UI made ARS3405R becomes best storage solution for all ACARD DVR product lines.

Features

- eSATA-to-SATA RAID 5 system
- RAID 0,1,5,JBOD, Normal*
- Supports one eSATA port
- Supports up to 5 SATA hard drives
- Support LCD and Network management
- Aluminum Frame design
- Supports Windows 32bit/64bit OS, Linux, Mac, Sun Solaris
- Supports ADR76xx and ADR 74xx series



** Functioning only when host support SATA Port Multiplier*

4-Bay eSATA-to-SATA RAID 5 1U Rack

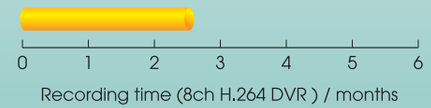
ARS3604R

Overview

ARS3604R is specifically designed for personal DVR storage application. It featured four 3.5 inches SATA I/II disk drives with RAID 0,1,5, JBOD, and Normal (Non-RAID) mode. ARS3604R provide DVR a simple way to expand capacity via an eSATA cable. RAID 5 mode protects valuable image data from HDD failure. Automatic temperature control and aluminum-alloy body design are good for heat dissipation while in long time recording. Friendly LCD control panel together with DVR integrated UI made ARS3604R becomes best storage solution for all ACARD DVR product lines.

Features

- eSATA-to-SATA RAID 5 system
- RAID 0,1,5,JBOD, Normal*
- Supports one eSATA port
- Supports up to 4 SATA hard drives
- Support LCD and Network management
- Aluminum Frame design
- Supports Windows 32bit/64bit OS, Linux, Mac, Sun Solaris
- Supports ADR76xx and ADR 74xx series



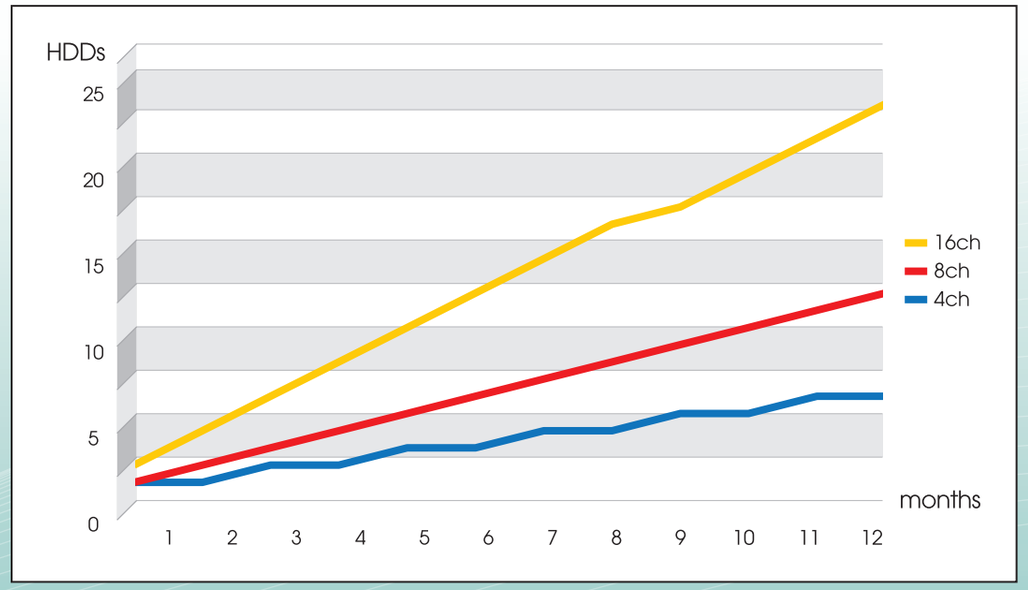
** Functioning only when host support SATA Port Multiplier*

Storage Demand for Full D1 DVR Recording

H.264						
Cameras/Time	1 Day	1 Week	1 Month	3 Months	6 Months	1 Year
4 cameras	37GB	259GB	1TB	3TB	7TB	14TB
8 cameras	74GB	517GB	2TB	7TB	13TB	27TB
16 cameras	148GB	1TB	4TB	13TB	27TB	54TB

MPEG4						
Cameras/Time	1 Day	1 Week	1 Month	3 Months	6 Months	1 Year
4 cameras	63GB	440GB	2TB	6TB	11TB	23TB
8 cameras	126GB	879GB	4TB	11TB	23TB	46TB
16 cameras	251GB	2TB	8TB	22TB	45TB	92TB

MJPEG						
Cameras/Time	1 Day	1 Week	1 Month	3 Months	6 Months	1 Year
4 cameras	1.8TB	12.5TB	54TB	161TB	321TB	652TB
8 cameras	3.6TB	25TB	107TB	321TB	643TB	1,304TB
16 cameras	7.1TB	50TB	214TB	643TB	1,286TB	2,607TB



Configuration:D1 (720x480)/ 30FPS/ H.264/ low video quality/ without voice/ 2TB HDD

	ARS3408J	ARS3408M	ARS3405R	ARS3604R
Picture			(available soon)	(available soon)
Host port	eSATA 1.5Gpbs x 1			
LCD Color	Blue			
Form Factor	Tower			1U Rack
Max. Capacity	Over 32TB			
HDD Bay/Type	8 x SATA		5 x SATA	4 x SATA
RAID Level	Normal*, JBOD	RAID 1*, Normal*, JBOD	RAID 0,1,5(with hot-spare), Normal*, JBOD	
On-line Rebuilding	n.a.	Yes		
Hot-swappable	n.a.	Hot-swap (RAID 1)	Hot-swap (RAID 1,5)	
Bad Sector detection	Yes			
Array Roaming	Yes			
F/W update	USB		SATA	
Console	n.a.		RS232 x 1 (VT100)	
Web Management	n.a.		Browser	
Remote management	n.a.		Ethernet 10/100 x 1	
Language support	English		English/Spanish/Portuguese	
Health Management	n.a.	FAN, Voltage, and Temperature		
Alarm	Buzzer		Email notification and buzzer	
Fan	8cm x 2		12cm x 1	4cm x 3
PSU (W / AC Input)	405W / 115 ~ 230V		180W / 100 ~ 240V	
Operation Temp.	10° C~40° C			
Dimension	435 (H) x 90 (W) x 455 (D) mm		239 (H) x 154 (W) x 270 (D) mm	44 (H) x 483 (W) x 460 (D) mm
Available	Q3,2010		Q4,2010	

** Functioning only when host support SATA Port Multiplier*

DVR Storage

DVR Family

	Smart H.264 Series				Advanced H.264 Series		
Model	ADR-7604S	ADR-7604SC	ADR-7608CA	ADR-7616CA	ADR-7604H	ADR-7604HC	ADR-7616SA
D1	2	2	4	4	4	4	4
Channel	4	4	8	16	4	4	16
Record Frame Rate	D1:60/50 Half-D1:120/100 CIF:120/100	D1:60/50 Half-D1:120/100 CIF:120/100	D1:120/100 Half-D1:240/200 CIF:240/200	D1:120/100 Half-D1:240/200 CIF:480/400	D1:120/100 Half-D1:120/100 CIF:120/100	D1:120/100 Half-D1:120/100 CIF:120/100	D1:120/100 Half-D1:240/200 CIF:480/400
Compression	H.264	H.264	H.264	H.264	H.264	H.264	H.264
HDMI Output	X	X	X	X	X	X	X
Jog & Shuttle	X	X	X	X	X	X	V
Support Internal SATA HDD	1	1	2	3	1	1	3
Support eSATA RAID	V	V	V	V	V	V	V
Backup	USB device DVD (option)	USB device DVD (option)	USB device DVD (option)	USB device DVD (option)	USB device CF card DVD (option)	USB device DVD (option)	USB device CF card DVD (option)
PTZ	V	V	V	V	V	V	V
Network	V	V	V	V	V	V	V

	Professional H.264 Series				
Model	ADR-7604P	ADR-7608P	ADR-7616	ADR-7616D	ADR-7616P
4	8	4	8	16	16
4	8	16	16	16	16
Record Frame Rate	D1:120/100 Half-D1:120/100 CIF:120/100	D1:240/200 Half-D1:240/200 CIF:240/200	D1:120/100 Half-D1:240/200 CIF:480/400	D1:240/200 Half-D1:480/400 CIF:480/400	D1:480/400 Half-D1:480/400 CIF:480/400
Compression	H.264	H.264	H.264	H.264&MJPEG	H.264&MJPEG
HDMI Output	Option	Option	X	Option	V
Jog & Shuttle	V	V	V	V	V
Support Internal SATA HDD	Default 3 up to 4	Default 3 up to 8	3	Default 3 up to 6	Default 3 up to 8
Support eSATA RAID	V	V	V	V	V
Backup	USB device CF card DVD (option)	USB device CF card DVD (option)	USB device DVD	USB device CF card DVD (option)	USB device CF card DVD (option)
PTZ	V	V	V	V	V
Network	V	V	V	V	V

Distributor

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